

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of claim 18 in the reply filed on February 13, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 24, 25, 26, 28, 29, 30, 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Which of the two electrodes from claim 18 is "the electrode"?

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 18, and 24-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Denes, Ferencz S. et al. (US 20030129107 A1). Denes teaches a treatment head (100; Figure 1,3,4)

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comprising a corona head (Figure 3) with a corona electrode (130; Figure 3; [0025], [0027]) for generating an ion field in response to a corona discharge when electrified and placed in proximity with a complementary electrode (140; Figure 3; [0025], [0027]), the ion field for treating the surface of a substrate located between the corona electrode (130; Figure 3; [0025], [0027]) and complementary electrode (140; Figure 3; [0025], [0027]); at least one orifice (124; Figure 3; [0025], [0027]) for generating a gas jet for cooling the substrate while being exposed to the ion field when the surface of the substrate is treated; and a flame head (142; Figure 1,3,4) with at least one orifice (142; Figure 3; [0025], [0027]) for generating a combustible gas for treating the surface of the substrate with a flame, as claimed by claim 18

Denes further teaches:

- i. The treatment head (100; Figure 1,3,4) according to claim 18, wherein the electrode is disposed on an insulator (148; Figure 4), thereby electrically isolating the corona electrode (130; Figure 3; [0025], [0027]) from the treatment head (100; Figure 1,3,4), as claimed by claim 24
- ii. The treatment head (100; Figure 1,3,4) according to claim 18, wherein the electrode includes a plurality of grooves (300; Figure 4) formed thereon to increase a given surface area of the electrode, as claimed by claim 25
- iii. The treatment head (100; Figure 1,3,4) according to claim 25, wherein the at least one orifice (124; Figure 3; [0025], [0027]) is formed in a center of the electrode and the gas is air, as claimed by claim 26. Applicant's claim requirement of "and the gas is air" is a claim requirement of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the

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invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

- iv. The treatment head (100; Figure 1,3,4) according to claim 18, further comprising: a leading edge (134; Figure 3) electrically coupled to the corona electrode (130; Figure 3; [0025], [0027]) to increase a surface area of the corona electrode (130; Figure 3; [0025], [0027]) and to act as a primer for sparking a generation of an ion field for the corona treatment of the surface of the substrate, as claimed by claim 27
- v. The treatment head (100; Figure 1,3,4) according to claim 18, wherein the substrate is a cup and the complementary electrode (140; Figure 3; [0025], [0027]) is cylindrical shape (see Figure 1) and adapted to hold the cup, and wherein the electrode further comprises: a curved surface to correspond to the cylindrical shape of the complementary electrode (140; Figure 3; [0025], [0027]) so as to provide a substantially constant gap there between, As claimed by claim 28. Applicant's claim requirement of "wherein the substrate is a cup" is a claim requirement of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in

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order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

- vi. The treatment head (100; Figure 1,3,4) according to claim 28, wherein the electrode includes a plurality of grooves (300; Figure 4) formed thereon to increase a given surface area of the electrode, as claimed by claim 29
- vii. The treatment head (100; Figure 1,3,4) according to claim 29, wherein the at least one orifice (124; Figure 3; [0025], [0027]) is formed in a center of the electrode and the gas is air, as claimed by claim 30. Applicant's claim requirement of "and the gas is air" is a claim requirement of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter, 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).
- viii. The treatment head (100; Figure 1,3,4) according to claim 28, further comprising: a leading edge (134; Figure 3) electrically coupled to the corona electrode (130; Figure 3; [0025], [0027]) to increase a surface area of the corona electrode (130; Figure 3; [0025],

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[0027]) and to act as a primer for sparking a generation of an ion field for the corona treatment of the surface of the substrate, as claimed by claim 31

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 32-34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denes, Ferencz S. et al. (US 20030129107 A1). Denes is discussed above.

Denes further teaches:

- i. The treatment head (100; Figure 1,3,4) according to claim 32, wherein the side wall of the cup is treated by the flame followed by a treatment by the ion field, as claimed by claim 33. However, Applicant's claim requirements are claim requirements of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

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- ii. The treatment head (100; Figure 1,3,4) according to claim 32, wherein the side wall of the cup is treated by the ion field followed by a treatment by the flame, as claimed by claim 34. However, Applicant's claim requirements are claim requirements of intended use in the pending apparatus claims. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

Denes does not teach a gas supply tube that is communicatively coupled to the at least one orifice (124; Figure 3; [0025], [0027]) of the corona electrode (130; Figure 3; [0025], [0027]) and wherein the gas supply tube holds the electrode adjacent to a side wall of the cup on the cylindrical shaped complementary electrode (140; Figure 3; [0025], [0027]), thereby treating the side wall of the cup with the ion field; and wherein the flame head (142; Figure 1,3,4) is positioned adjacent to a side wall of the cup for treating the side wall of the cup the flame.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a gas/fluid supply tube to the apparatus of Denes.

Motivation to add a gas/fluid supply tube to the apparatus of Denes is for conveying the desired cooling fluid.

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***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Friday schedule from 9am through 5pm. The official fax phone number for the 1792 art unit is (571) 273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435

/Rudy Zervigon/

Primary Examiner, Art Unit 1792